

Amendments to the Specification:

Please amend the specification as follows:

Please replace paragraph [0002], with the following rewritten paragraph:

[0002] The present invention relates to a mobile telecommunication system and is particularly concerned with the handover of calls between ~~two~~ two types of communication ~~system~~ systems, particularly handover between a GSM and a UMTS network.

Please replace paragraph [0003], with the following rewritten paragraphs:

[0003] It has been generally proposed that it would be desirable to provide handover between a GSM and a UMTS network. However, this is not a straightforward task to accomplish and there are a number of problems to implement before this can be successfully achieved; the present invention is concerned with these problems. It is, however, more generally applicable to interoperability between networks using different protocols; in such a case, the terms used herein are to be construed as applying to the relevant equivalent components of the networks to which the invention is applied. Although aspects of the invention provide independent solutions to various aspects of the problems concerned with GSM and UMTS handover, all are concerned with this common problem and in particular are concerned with a novel solution in which an RNC of the UMTS network controls handover to a large extent.

SUMMARY OF THE INVENTION

[0003A] The invention is described in the context of GSM and UMTS networks for ease of understanding, but is applicable to handover between other networks with similar characteristics. Accordingly, all references to GSM and UMTS and all terms of art used herein are to be construed as encompassing equivalent features of other networks. In particular, the present Japanese PDC network is of similar architecture to GSM and the term GSM (or GSM-type) as used in the specification and claims is intended to encompass such a network. Similarly, the term UMTS (and related terms) is intended to encompass a UMTS

system in accordance with present standards and proposals and any derivatives or equivalents thereof.

[0003B] In a first aspect, the invention provides a method of processing a handover request from a base station controller (BSC) of a GSM network, the method comprising passing a handover request with GSM parameters from a base station controller (BSC) through a Master Switching Centre (MSC) of the GSM network to a UMTS core network (C) and to a Radio Network Controller (RNC) of the UMTS network; in the radio network controller, translating the GSM parameters to UTRAN parameters; and allocating UTRAN resources in response to the translated parameters. Thus, rather than translating the GSM parameters on entry to the UMTS network, the GSM parameters pass transparently through at least a portion of the UMTS network to the RNC. The parameters may include one or more of data rate, call type (voice, data, fax, other, e.g. video, IP), Quality of Service etc. This reduces processing load elsewhere in the network and enables the RNC to allocate the optimum UTRAN resources for the call.

Please replace paragraph [0005], with the following rewritten paragraph:

[0005] Preferably, the Radio Network Controller (RNC) is arranged, following translation of the GSM format handover request firstly to perform radio link setup and then, following a response from the radio link, to perform data transport setup for communication between the Radio Network Controller and the Core Network. This allows communication with the Core Network to be established following successful radio setup rather than independently, thus avoiding unnecessary use of CN or RNC (Iu interface) resources if radio link setup is not possible. This preferable feature may be provided independently [[i a]] in a third aspect in which the invention provides a method of establishing UMTS communication with User Equipment following receipt by a Radio Network Controller of a GSM handover request, the method comprising, in the Radio Network Controller, setting up a radio link to a Node B and, following acknowledgement of the radio link setup, in the Radio Network Controller, setting up data transport between the Radio Network Controller and the Core Network.

Please replace paragraph [0011], with the following rewritten paragraph:

[0011] Preferably, at least during handover, the User Equipment (UE) is arranged to communicate over both the GSM network and the UMTS network simultaneously or quasi-simultaneously. This feature may be provided independently ~~[[i a]]~~ in a fifth aspect in which the invention provides a method of communicating between User Equipment and GSM and UMTS networks comprising communicating information simultaneously or quasi-simultaneously via both network during handover from one network to the other.

Please replace paragraph [0016], with the following rewritten paragraph:

[0016] 1. The BSC sends Handover Required message to ~~[[teh]]~~ the GSM MSC. This includes the GSM information elements (service information rate, service type, etc.) and the UMTS cell/Node-B information on which good radio quality is achievable.

Please replace paragraph [0018], with the following rewritten paragraph:

[0018] 3. The CN sends RANAP message Handover Request ~~[[to te]]~~ to the Target RNC. This message will contain information elements indicating from which network type this handover is taking place e.g. "handover-type" = "from GSM". It will also contain information elements allowing transparent transfer of GSM Parameters to the RNC, e.g. GSM Bearer Capability, version number and other relevant parameters relating to the GSM call. Additionally, the relevant UMTS cell/Node-B information provided by the MS-UE is also transferred transparently to the RNC.

Please replace paragraph [0024], with the following rewritten paragraph:

[0024] 9. The CN sends Prepare Handover Response to ~~[[teh]]~~ the GSM MSC (forwarding the UMTS parameters).

Please replace paragraph [0026], with the following rewritten paragraph:

[0026] 11. BSC sends the RR message Handover Command to ~~[[teh]]~~ the UE. This contains the necessary UMTS parameters.

Please replace paragraph [0027], with the following rewritten paragraph:

[0027] 12. The UE interprets the UMTS parameters within the RR message and is able to switch the call from a GSM call into a UMTS call with multiple or single diversity branches as indicated ~~[[i n the]]~~ in the UMTS parameters. At this sate, the mobile unit is receiving information from the GSM network using its GSM capabilities and uses this information to switch communication to the UMTS network or simultaneously communicate with the UMTS network and GSM network using its UMTS and GSM capabilities.

Please replace paragraph [0029], with the following rewritten paragraph:

[0029] 14. On detection of ~~synchronisation~~ synchronization, the Node B sends NBAP message Handover Detect to the RNC.

Please replace paragraph [0030], with the following rewritten paragraph:

[0030] 15. If at least one of the Radio Links has been successfully set up, then the RNC is able to establish the RLC link for the DTCH and the RRC for the DCCH to the UE. The RNC is then able to signal to ~~[[teh]]~~ the CN and onwards to the MSC that the handover is complete. The MSN is able to switch the call through on the new UTRAN leg.

Please replace paragraph [0031], with the following rewritten paragraph:

[0031] 16. In the case of having allocated multiple radio links on the DL and if UL ~~synchronisation~~ synchronization has not been detected, then the appropriate signalling may take place between Node B and RNC to release the unused radio resources.

Please replace the heading just above paragraph [0060], with the following rewritten heading:

~~Signaling~~ Signaling link